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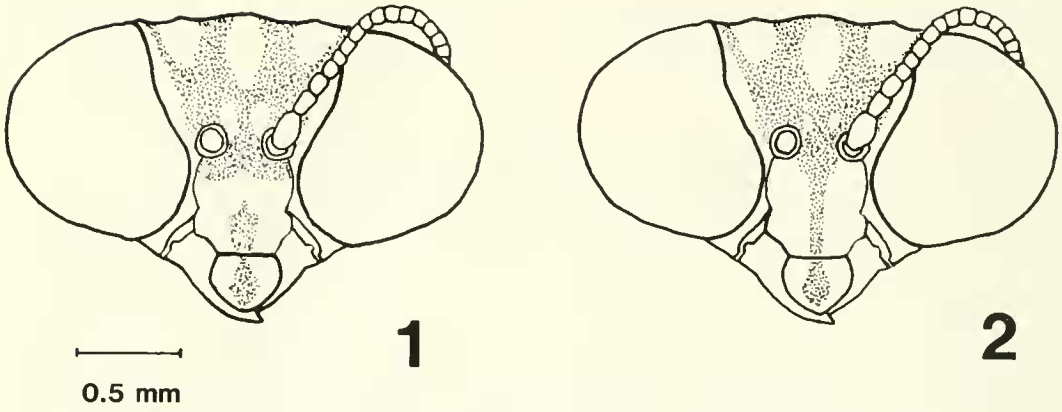
NOTE

# Taxonomic Status of *Mantispa sayi*, *Mantispa fuscicornis*, and *Mantispa uhleri* (Neuroptera: Mantispidae)

The North American mantispines *Mantispa sayi* Banks (1897. Trans. Am. Entomol. Soc. 24: 21–31), *Mantispa fuscicornis* Banks (1911. Trans. Am. Entomol. Soc. 37: 335–366), and *Mantispa uhleri* Banks (1943. Psyche 50: 74–81) are currently considered sibling species (Macleod, in Hughes-Schrader, 1979. Chromosoma 75: 1–17), even though recent investigators have found them to be essentially indistinguishable both karyotypically and morphologically (Hughes-Scrader 1979), (Redborg, 1982. J. Arachnol. 10:92–93). There have been extensive biological studies on *M. uhleri* (Redborg and MacLeod. 1985. Ill. Biol. Monogr. 53, 130 pp.) and natural history observations on *M. fuscicornis* (Gilbert and Rayor. 1983. J. Kans. Entomol. Soc. 56: 578–580), (Rice, 1986. J. Kans. Entomol. Soc. 59: 121–126), although no significant biological differences were noted. All three species reportedly were reared in the laboratory, but only data on *M uhleri* was published (Redborg and MacLeod 1985). I recently examined the type specimens of these species in the Museum of Comparative Zoology (MCZ), Harvard University, as part of an ongoing revision of the New World Mantispinae. A reevaluation of the taxonomic status of these species was prompted by the examination of these types and of numerous other specimens from Arizona, Arkansas, Connecticut, Florida, Georgia, Illinois, Kansas, Maryland, Minnesota, Mississippi, Missouri, Nebraska, New Mexico, Ohio, Oklahoma, South Carolina, Texas, Utah, and Mexico.

The original description of *M. sayi* was based on one specimen from Texas and two from Lake Worth, Florida, coll. Mrs. Slosson. The only type specimen of *M. sayi* in the MCZ is a male with the following verbatim label data: "Type," "Brazos Co., Tex.," "Collection N. Banks," "Type 10767," "type *Mantispa sayi* Bks." *Mantispa fuscicornis* was described from two specimens collected in Florida, one from Kissimmee and another from Lake Worth, coll. Mrs. A. T. Slosson. Both type specimens of *M. Fuscicornis* are present in the MCZ. There is a male with the label data "Kissimmee Fla," "Collection N. Banks," "M.C.Z. Type 10769," "type *Mantispa fuscicornis* Bks," and a female with the label data "type," "L. Worth, Fla," "Collection N. Banks," "M.C.Z. Type 10769." The absence of the other two *M. sayi* syntypes and the similarity of their collection data with those of the female syntype of *M. fuscicornis* suggest that this specimen was originally one of the type specimens of *M. sayi*. While the lack of a 10767 type label of the *M. fuscicornis* female might argue against such a conclusion, the numbers currently assigned to the type specimens of both *M. sayi* and *M. fuscicornis* were most likely assigned well after the original descriptions of both species. All specimens of a given type series at the MCZ are assigned identical type numbers, but prior to 1920 Banks did not designate type numbers in his species description of mantispids. The type numbers (10767, 10769) assigned to the two species in question are very close to the type numbers (10758–10762, 10770) currently assigned to the type specimens of species described by Banks in 1913 (Trans. Am. Entomol. Soc. 39: 201–242), as well as to the type numbers (10774–10778) designated by Banks in his descriptions of mantispid species in 1920 (Bull. Mus. Comp. Zool. 64: 299–362). Therefore, the specimen from Lake Worth would not be expected to bear a *M. sayi* type number even if it were part of that type




Figs. 1, 2. *Mantispa sayi*. Color patterns on heads of male specimens collected on 20 July 1968 at Corpus Christi Lake State Park, San Patricio Co., Texas. Anterior view.

series. Because of the uncertain status of the specimen from Lake Worth, I hereby designate the syntype male of *M. sayi* from Brazos Co., Texas, as the lectotype of *M. sayi* and the missing specimens from Lake Worth, Florida, as paralectotypes. In addition, the male of *M. fuscicornis* from Kissimmee, Florida, is hereby designated the lectotype of *M. fuscicornis* and the female from Lake Worth, Florida, is designated as the paralectotype.

Banks (1911) did not include any characters to distinguish *M. fuscicornis* from *M. sayi*, and noted only that *M. fuscicornis* was similar to *M. sayi* in general structure. Redborg (1982. J. Arachnol. 10: 92–93) subsequently used facial markings to separate *M. fuscicornis* from both *M. sayi* and *M. uhleri*, stating that only *M. fuscicornis* possessed a broad, inverted Y-shaped line on the frons, with the forks of the Y looping under the antennal sockets. I have found that the face markings of *M. sayi* vary considerably (Figs. 1, 2) and that the range of variation encompasses what I assume are the facial markings attributed both to *M. fuscicornis* (Fig. 1) and to the other two species. (Fig. 2). Examinations of genitalic and other morphological characters of the type specimens and of specimens from the aforementioned locations has revealed no basis for the continued separation of these species. Therefore, I hereby consider *Mantispa fuscicornis* Banks to be a junior synonym of *Mantispa sayi* Banks (NEW SYNONYMY).

The holotype female of *M. uhleri* is located in the MCZ along with four female paratypes. In distinguishing this species from the preceding two, Banks (1943) referred to its almost entirely black abdomen and to the upward extension of the dark face mark to the vertex. I have found that the dark brown to black markings on abdominal segments of *M. sayi* females are often more extensive than those of males, causing female abdomens to look darker. Redborg and MacLeod (1985) also noted this dimorphism for *M. uhleri*. Therefore, the color differences noted by Banks could be attributed to this sexual dimorphism if Banks was comparing the female types of *M. uhleri* to the male types of *M. sayi* and *M. fuscicornis*. Also, the abdomen of the holotype of *M. uhleri* is discolored, darkened, partially adhered to the left hind wing, and missing both the third abdominal tergite and all segments posterior to the fifth. Therefore, the poor condition of the holotype may have contributed to Banks' diagnosis if the present condition of the holotype is essentially unchanged from 1943. The difference in facial markings mentioned by Banks has been discussed above. In addition, I examined first

instars obtained from *M. sayi* females collected in Texas and could find no differences between these specimens and the description of *M. uhleri* first instars provided by Redborg and MacLeod (1985). Therefore, for essentially the same reasons given earlier when designating *M. fuscicornis* a junior synonym of *M. sayi*, I consider *Mantispa uhleri* Banks to be a junior synonym of *Mantispa sayi* Banks (NEW SYNONYMY).

The synonomy of both *M. fuscicornis* and *M. uhleri* with *M. sayi* results in the biological information on the two former species being combined and attributed to the latter. The clarification of the status of these names at this time facilitates future studies on the ecological characteristics of *M. sayi* and allows meaningful comparisons between life-history characteristics of this species and other mantispines.

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